SOC Assignment 1

Note: Once the entire workflow has been finished, before again starting the same process on a new order, please delete the entire data in the Global Context and re-run the flow. Otherwise, the actions will be triggered on the same order item using global context.

Debugging: The logging is done in both the node-red debug menu and the console log. Each and every debug message has the following format:

{
 _msgid: '4031bd9a8a45c151',
 payload: {
 },
 topic: 'Message indicating the action performed',
 _event: 'node:733eb867e17ec2c5'
}

msgid - Is some random message id generated by node-red.
payload - contains all the data related to the order and is commonly used and updated based on the actions performed by each party. This helps us to keep track of all the actions and to keep all the parties on the same page regarding the order information.
topic - contains the message indicating the action performed between two parties. This helps us understand the flow.
_event - Is some random event id generated by node-red.

Workflows:

a. Buyer Workflow:
    Enactments:
- Submit Order.
- Submit Payment.
- Submit Transaction Review.
- Receive Item.
- Receive live tracking info from the shipping service.
- Receive shipping status from the merchant.
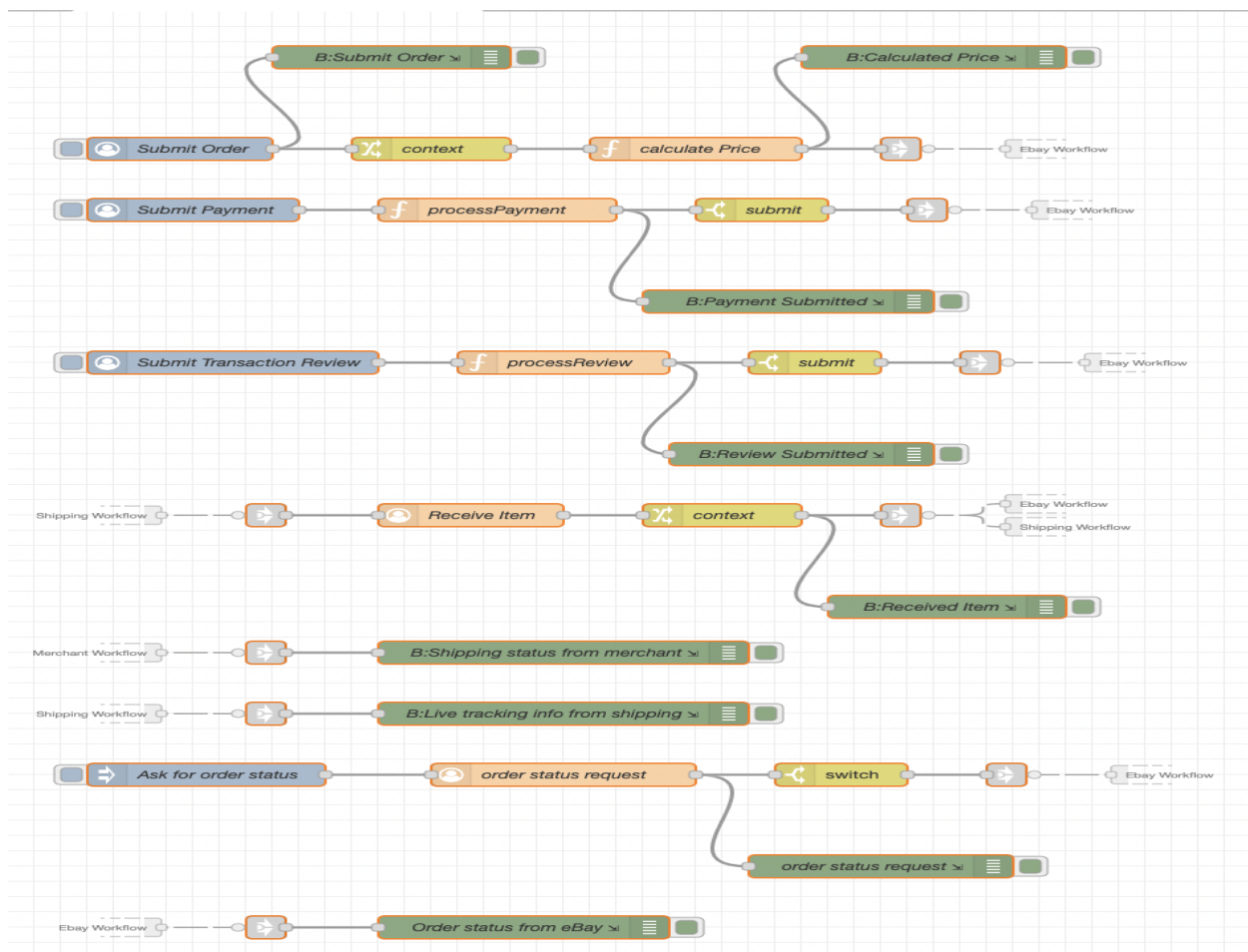- Request order status from the eBay website.

    Conditions satisfied:
- Buyer cannot submit payment without placing an order.
- Buyer cannot submit a transaction review without placing an order.
- Buyer cannot submit payment more than once for the same order.

- Buyer cannot submit a transaction review more than once for the same order.
- Buyer cannot request order status without placing the order.

Workflow:
- Once the buyer submits the order, the order is placed and all the details are received at the eBay end. eBay puts the order on hold waiting for the payment to be done.
- Meanwhile, the buyer can provide a review for the transaction which is updated at the eBay site. This can be done at any point of time once after the order is placed, even after the delivery of the order.
- Once the buyer submits the payment, the payment is acknowledged by eBay and the order is forwarded to the merchant for processing.
- Once the merchant processes the order, the order is shipped and delivered to the buyer. During the shipping process, the buyer receives live tracking information from the shipping company and can request the same from the eBay website.

- Buyer can also receive shipping information from the seller if the seller provides it.
- After the buyer receives the order, the order status gets updated to delivered at both the shipping and eBay sides.
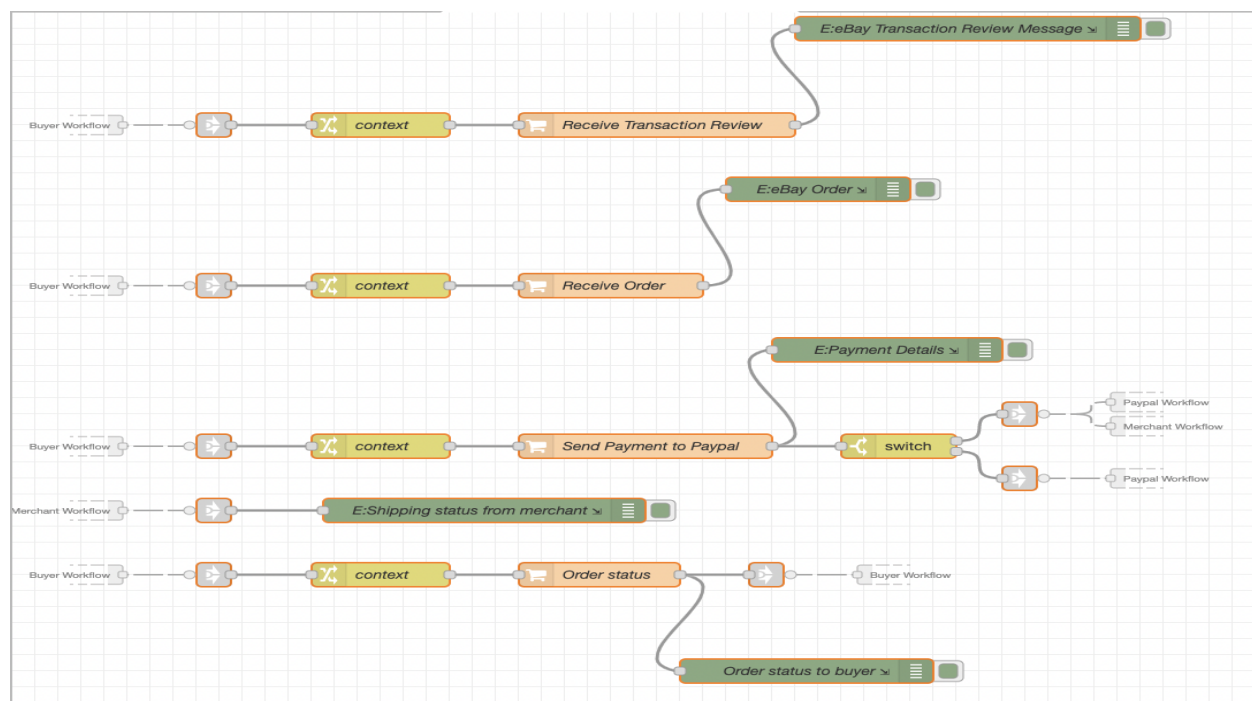
b. eBay Workflow:

Enactments:
- Receives the order.
- Forwards the order to the merchant for processing.
- Sends payment to merchant through PayPal.
- Sends order status to the buyer on demand.
- Receives transaction review from the buyer.
- Receives shipping status from the merchant.

Conditions satisfied:
- eBay puts the order on hold until the payment is submitted by the buyer.
- Notifies PayPal about the payment to the merchant with a hold request until the item is delivered.
- Notifies PayPal to release the payment hold confirming the item delivery.

Workflow:
- Initially, when an order is received at the eBay end, it processes the order information and puts the further processing on hold until the payment is received from the buyer.

- Once the payment is done by the buyer, eBay forwards the order information to the merchant for further processing and sends payment to the merchant through PayPal with a hold request, until the item is delivered.
- And once the ordered item is delivered as a part of the shipping workflow, eBay receives the delivery information and confirms the delivery with Paypal. Paypal now processes the payment to the merchant.
- The buyer can submit a transaction review at any point in time once the order has been placed. The same information is reflected on the eBay website.
- The buyer can request the order status from eBay at any point in time once the order is placed.
- Merchant can also update the shipping information on the eBay site at any point of time once after the shipping is started.
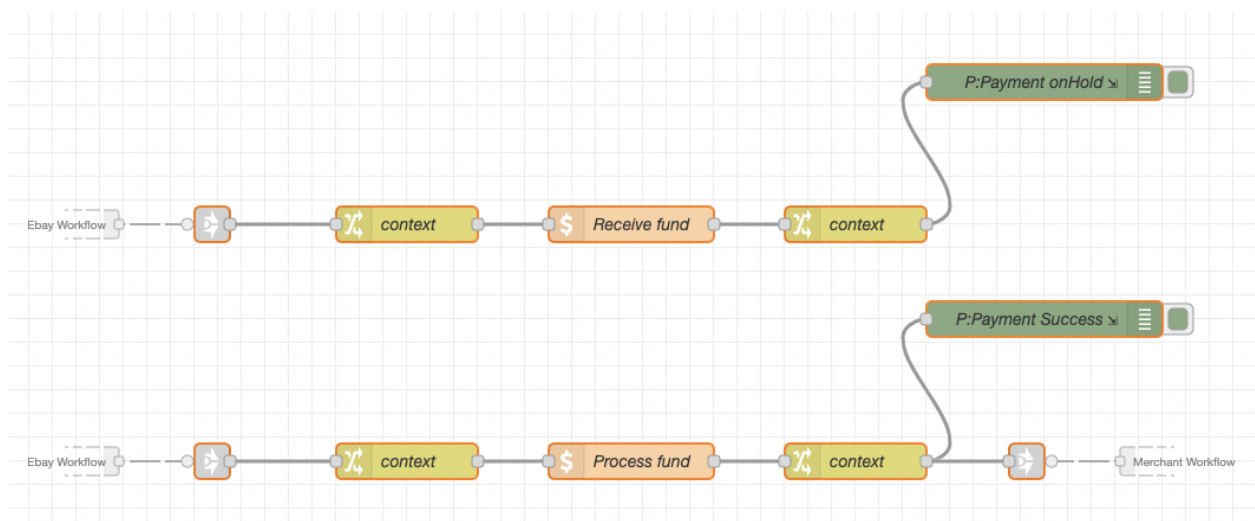
c. Paypal Workflow:

Enactments:
- Receives fund.
- Processes fund upon delivery confirmation from eBay.
- Notifies the merchant about the payment credit.

Conditions satisfied:
- Receives fund from the eBay site for the payment and holds until eBay confirms the order delivery.
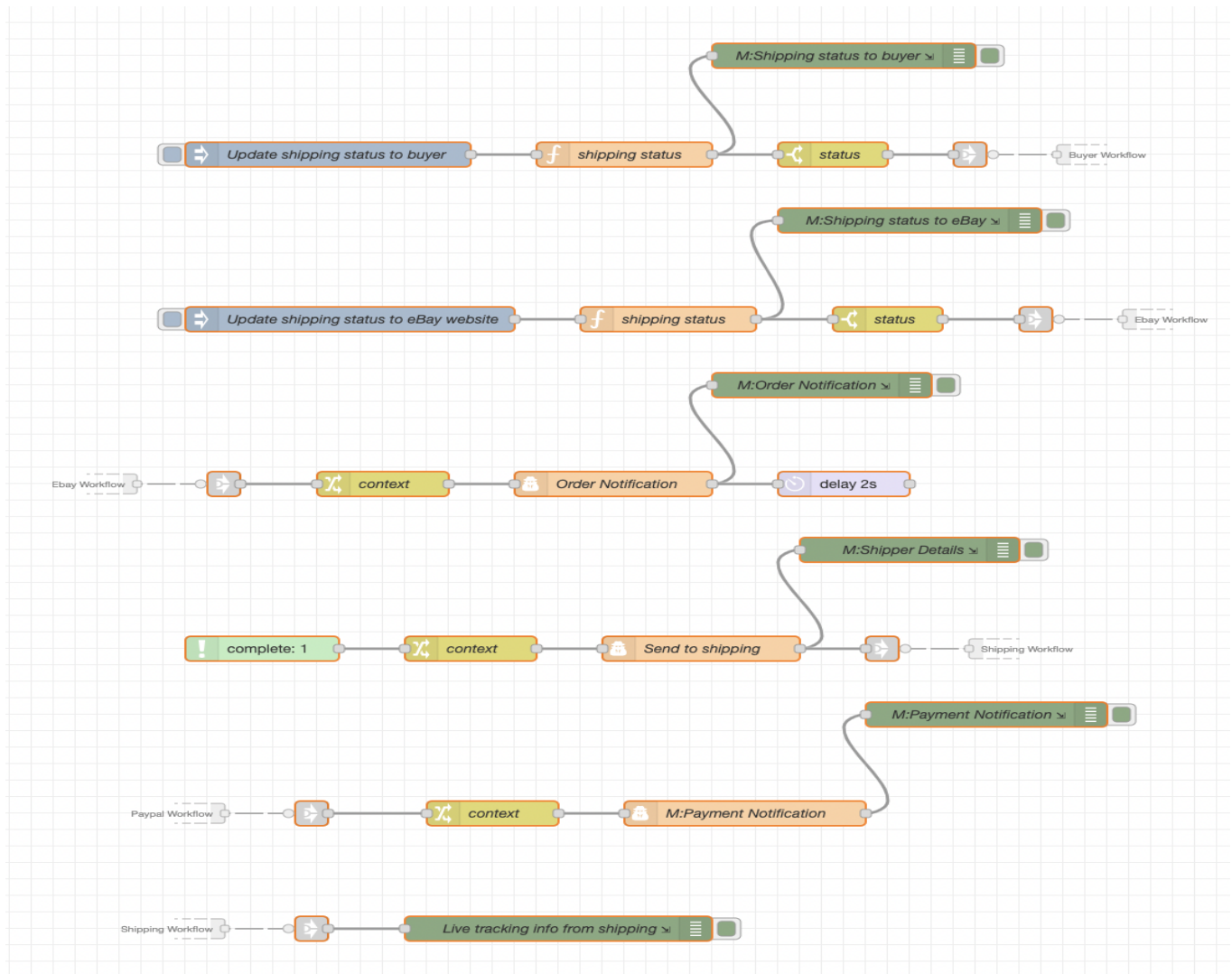

Workflow:
- eBay sends the fund to be processed as a payment to the merchant.

- Paypal puts the payment on Hold until it receives a delivery confirmation from the eBay website.
- Once the delivery confirmation is received, PayPal processes the payment and notifies the merchant.

d. Merchant Workflow:

Enactments:
- Update shipping status to the buyer.
- Update shipping status on the eBay website.
- Process the order.
- Send the order to the shipping service.
- Get live updates from the shipping service which can be used to update shipping status to both eBay and buyer.
- Receive payment credit notification from PayPal.

Conditions satisfied:
- Merchants can update the shipping status to both buyer and seller in any order only once the shipment is started.
- The merchant is the primary contact with the shipping service and has live updates about the shipping.

Workflow:
- Merchant receives the order information from eBay to go ahead with the further processing.
- The merchant prepares the order and sends it for shipping by contacting the shipment service. Merchant also gets a trackingID from the shipping service for an easy track of the delivery package.
- Merchant gets live updates from the shipping service and has an option to update the same for both eBay and the buyer in any order according to the merchant's convenience.
- Once the item is delivered, the merchant receives the payment credit notification to his/her PayPal account and a successful delivery message from the shipping service.

e. Shipping Workflow:

Enactments:
- Receives shipment requests from the merchant.
- Generates shipping label based on the information provided by the merchant.
- Packs and ships the item.
- Provides live tracking details to seller and buyer.
- Sends a successful delivery notification to the seller.

Conditions satisfied:
- Makes sure that both the seller and buyer are aware of the shipment status.
- Is a direct contact to the seller.

Workflow:
- Starts the shipping process when the merchant approaches with a request.
- Generates label based on the information provided by the merchant.
- Packs the order items and makes note of their dimensions.
- Ships the order items from the fulfillment center and provides both merchant and buyer with live shipping information.
- Once the item is successfully delivered to the buyer and verified, the shipping service sends a successful delivery notification to the merchant.

Merchant Workflow —— context —— 🚚 Generate Shipping Label —— context —— ⏱ delay 1s

S:Label Details ⌄

S:Package Details ⌄

! complete: 1 —— 🚚 Pack And Ship Item —— context —— ⏱ delay 2s

S:In Transit ⌄

! complete: 1 —— 🚚 In Transit —— context —— delay 3s

S:Out for Delivery ⌄

! complete: 1 —— 🚚 Out for Delivery —— context —— ⏱ delay 4s —— Buyer Workflow

Live tracking info to merchant ⌄

! complete: 4 —— 🚚 Live tracking info to merchant —— Merchant Workflow

Live tracking info to buyer ⌄

! complete: 4 —— 🚚 Live tracking info to buyer —— Buyer Workflow

Delivered notification to merchant ⌄

Buyer Workflow —— context —— 🚚 Delivered notification to Merchant —— Merchant Workflow